

ABSTRACT OF THE DISCLOSURE

An imaging apparatus using a charge multiplying solid-state imaging device for use with an endoscope system, etc., capable of providing an output signal with an improved S/N ratio by reducing the dark noise. The full well size of the CCD imaging device is reduced to $1/M$ of the number of electrons corresponding to a maximum amount of light which may be received by the individual pixel determined by the technical specifications of the system, and the signal charges are read out N times in a prescribed time period corresponding to a time for a single frame in a TV frame rate. The system satisfies the relation, $nd(1-1/M) > nr^2(N^2-1)$, assuming that nd is the dark noise and nr is the readout noise contained in single reading from a reference solid-state imaging means having a full well size equivalent to the number of electrons described above.